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TWO-YEAR CLINICAL OUTCOMES OF EVEROLIMUS-ELUTING STENTS VERSUS PACLITAXEL-ELUTING STENTS IN PATIENTS WITH CORONARY ARTERY DISEASE: INSIGHTS FROM RANDOMIZED TRIALS

i2 Poster Contributions
Ernest N. Morial Convention Center, Hall F
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Session Title: PCI - DES III
Abstract Category: 16. PCI - DES (clinical/outcomes)
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Background: First-generation drug-eluting stents, which released sirolimus or paclitaxel, were shown to be superior to bare-metal stents in reducing the magnitude of neointimal proliferation, the incidence of clinical restenosis, and the need for reintervention. Second-generation drug-eluting stents are designed to provide better stent safety and performance. We performed a meta-analysis of randomized trials to evaluate the long-term (2 years) safety and efficacy of a second-generation everolimus-eluting stent (EES) compared with a widely used first-generation paclitaxel-eluting stent (PES) in patients with coronary artery disease (CAD).

Methods: The published literature was scanned by formal searches of electronic databases and conference proceedings from January 2001 to September 2010. All randomized trials comparing EESs versus PESs and reporting the outcomes of interest were examined for analysis. Odds ratio (OR) was used as summary estimate.

Results: A total of 4 randomized trials were included in the present meta-analysis, involving 6,788 patients (4,247 in EES group and 2,541 in PES group). EESs were superior to PESs with respect to the primary end point of major adverse cardiac events (cardiac death, myocardial infarction [MI], and ischemia-driven target lesion revascularization [TLR]) at 2-year follow-up (7.1% vs. 11.0%, OR 0.63, 95% confidence interval [CI] 0.53-0.75, P < 0.001). The 2-year rates of target-vessel MI, ischemia-driven TLR and definite or probable (ARC definition) stent thrombosis [ST] were also lower with EESs than with PESs (2.9% vs. 5.3%, OR 0.57, 95% CI 0.44-0.73, P < 0.001 for MI; 4.1% vs. 6.7%, OR 0.57, 95% CI 0.45-0.71, P < 0.001 for TLR; 0.7% vs. 2.3%, OR 0.33, 95% CI 0.20-0.52, P < 0.001 for ST). There was no significant difference between EESs and PESs with respect to 2-year cardiac mortality (1.2% vs. 1.5%, OR 0.90, 95% CI 0.58-1.38; P = 0.62) or all-cause mortality (2.4% vs. 3.0%; OR 0.84, 95% CI 0.62-1.14; P = 0.27).

Conclusions: The second-generation EESs are better than the first-generation PESs in terms of long-term (2 years) safety and efficacy.